

CLAIMS

1. A semiconductor memory element comprising:

a substrate;

5 a semiconductor circuit portion made of an organic semiconductor disposed on the substrate; and

a protection portion disposed adjacent to the semiconductor circuit portion, the protection portion being made of a material capable of causing a crack extending to the semiconductor circuit
10 portion due to a predetermined means.

2. A semiconductor memory element comprising:

a substrate;

a semiconductor circuit portion made of an organic
15 semiconductor disposed on the substrate;

a protection portion disposed adjacent to the semiconductor circuit portion and having a window portion; and

a freely strippable seal member for sealing the window
portion of the protection portion.

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3. A semiconductor memory element comprising:

a substrate;

a semiconductor circuit portion made of an organic semiconductor disposed on the substrate;

25 a protection portion disposed adjacent to the semiconductor circuit portion; and

a performance deterioration portion including a performance deterioration material and disposed adjacent to the protection portion, the protection portion being made of a material capable of causing a crack extending to the semiconductor circuit portion due to a predetermined means.

4. The semiconductor memory element according to claim 1 or 3, wherein the predetermined means is a mechanical punch means.

5. The semiconductor memory element according to claim 1 or 3, wherein the predetermined means is a heating means.

6. The semiconductor memory element according to claim 1 or 3, wherein the predetermined means is a pressurizing means.

7. The semiconductor memory element according to claim 1 or 3, wherein the predetermined means is a light irradiation means.

8. A semiconductor memory element comprising:

a substrate;

a semiconductor circuit portion disposed on the substrate and made of an organic semiconductor including a performance deterioration material; and

a protection portion disposed adjacent to the semiconductor circuit portion, wherein

the performance deterioration material is activated by a

predetermined means.

9. A semiconductor memory element comprising:
a substrate;

5 a semiconductor circuit portion disposed on the substrate and
made of an organic semiconductor including a performance
deterioration material; and

a film disposed adjacent to the semiconductor circuit portion,
capable of obtaining light transmissive property due to an
10 irradiation of light having a predetermined wavelength thereon,
wherein

the performance deterioration material is activated by a
predetermined means.

15 10. A semiconductor memory element comprising:
a substrate;

a semiconductor circuit portion disposed on the substrate and
made of an organic semiconductor including a performance
deterioration material;

20 a protection portion disposed adjacent to the semiconductor
circuit portion and having a window portion; and

a freely strippable seal member for sealing the window
portion of the protection portion.

25 11. The semiconductor memory element according to any one of
claims 8 to 10, wherein

the performance deterioration material is encapsulated.

12. The semiconductor memory element according to claim 8 or 9,
wherein

5 the predetermined means is a pressurizing means.

13. The semiconductor memory element according to claim 8 or 9,
wherein

the predetermined means is a heating means.

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14. The semiconductor memory element according to claim 9,
wherein

the predetermined means is an UV irradiation means.

15 15. The semiconductor memory element according to claim 9,
wherein

the predetermined means is an electron beam irradiation
means.

20 16. The semiconductor memory element according to claim 2 or
10, wherein

the deterioration in the semiconductor circuit portion of the
organic semiconductor is started by stripping off the seal member.

25 17. The semiconductor memory element according to any one of
claims 1 to 16, wherein

the semiconductor portion is a semiconductor portion in a range corresponding to a predetermined circuit portion of the semiconductor circuit portion.

5 18. The semiconductor memory element according to claim 17, wherein

the predetermined circuit portion is a data area.

10 19. The semiconductor memory element according to claim 17, wherein

the predetermined circuit portion is a management information area.

15 20. The semiconductor memory element according to claim 17, wherein

the predetermined circuit portion is an electric power shutdown switch.

20 21. The semiconductor memory element according to claim 17, wherein

the predetermined circuit portion is an encryption key record area.

25 22. A lifetime operation starting apparatus having an starting device for starting an operation of a semiconductor memory element using an organic semiconductor within a lifetime, comprising

a seal strip off device for stripping off a seal attached to a position corresponding to a predetermined portion of the organic semiconductor in order to deteriorate a performance of the organic semiconductor as the starting device.

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23. A lifetime operation starting apparatus having an starting device for starting an operation of a semiconductor memory element using an organic semiconductor within a lifetime, comprising, in order to cause a crack in a protection portion protecting the organic semiconductor as the starting device, at least one of:

a mechanical punch device for punching a microhole through the protection portion;

a heating device for heating the protection portion;

a pressurizing device for pressurizing the protection portion;

15 and

a light irradiation device for irradiating the protection portion with light.

24. A lifetime operation starting apparatus having an starting device for starting an operation of a semiconductor memory element using an organic semiconductor within a lifetime, comprising, in order to activate a performance deterioration material dispersed in the organic semiconductor as the starting device, at least one of:

a UV irradiation device for irradiating the performance deterioration material in the organic semiconductor with UV; and

an electron beam irradiation device for irradiating the

performance deterioration material in the organic semiconductor with electron beam.